

# **EXECUTIVE SUMMARY**

## **TALK II - SINCGARS**

### **Multiservice Communications Procedures for the Single-channel Ground and Airborne Radio System (SINCGARS)**

#### **Overview**

To fight together and win on the modern battlefield, tactical air, land, and sea forces need an effective command, control, and communications (C3) system. Technological improvements in enemy jamming and electronic collection and exploitation seriously challenge the effectiveness of friendly tactical communications. With the development and fielding of SINCGARS-operative radios, the capabilities of sophisticated, complex enemy jammers have to a great extent been neutralized.

The worldwide operational need for a very high frequency-frequency modulation (VHF-FM) radio resistant to electronic attack (EA) is mandated by the requirement that Army, Marine Corps, Navy, and Combat Air Forces be capable of performing multiservice air, land, and sea operations in any theater. Such a capability is necessary to ensure successful combat operations. SINCGARS radios, with their single-channel and jam resistant features, provide interoperable communications between surface and airborne command and control assets. SINCGARS is replacing most of the existing tactical VHF-FM radios in the Department of Defense (DOD) inventory.

This publication standardizes procedures for the multiservice operation of SINCGARS. It addresses both physical and electronic interservice transfer of SINCGARS electronic protection (EP) information and communications security (COMSEC) keys necessary for jam resistant and secure operations. This publication, developed in conjunction with the contractors of the SINCGARS equipment, will enhance equipment and procedural interoperability.

This publication provides the approved TRADOC, MCCDC, Navy and Combat Air Forces multiservice SINCGARS communication procedures. It also provides procedures to effect interservice communications and enhance friendly operations in an electronic warfare (EW) environment.

#### **SINCGARS Variants and Key Systems**

The services have developed their own versions of SINCGARS radios to meet their needs. The Army has one airborne, one manpack, and six vehicular versions in both integrated COMSEC (ICOM) and non-integrated COMSEC (non-ICOM) models. The Air Force, Navy, and Marines will use the Army version of the manpack and vehicular radio. Likewise, the services have developed the necessary support equipment. The Army will use the Revised

Battlefield Electronic Communications-electronics Operating Instructions System (RBECS). The Marine Corps will use portions of RBECS to support SINGARS net management functions. RBECS, or modifications thereof, will be integrated into ground units to enhance the communications process. The Air Force Key Data Management System (AFKDMS) supports the AF SINGARS radios. For airborne users, the Navy will use the AN/ARC-210 radio and an MS-DOS PC or Tactical Air Mission Planning System (TAMPS) that will run the ARC-210 Fill Program (AFP). Navy shipboard SINGARS will use the Army version of the SINGARS radio and will also use RBECS. AFP allows the operator to create ARC-210 loadsets by entering single channel data, entering Have Quick data, and importing SINGARS data in the form of an RBECS loadset files.

Effective secure communications between services is possible because all SINGARS variants share common characteristics that permit interoperability.

## **Planning and Execution**

The heart of this publication is the information on the planning and execution of operational procedures for employing SINGARS. These procedures include the necessary responsibilities of the joint communications staff in managing SINGARS in a combat zone. They also cover the availability, distribution, management of EP variables, and COMSEC keys.